

BROOKS
INSTRUMENT



Did you Know?

Flotech Solutions Ltd are the exclusive U.K. distributor for Brooks Instrument, Manufacturers of the new DLI (Direct Liquid Injection) Vapouriser.



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- **Introducing the Brooks DLI (Direct Liquid Injection) Vapouriser**
- **What are some of the problems with conventional vapouriser systems ?**
- **How is the DLI different?**
- **Vapour On – Demand**

Introducing the Brooks DLI (Direct Liquid Injection) Vapouriser



The DLI Vapouriser is an extremely high performing vapouriser system which is capable of provide reliable and complete vapourisation of many expensive or difficult fluids. Featuring unique atomisation and heat exchanger technologies, Brooks DLI vapourisers deliver pure vapour for every application.

Applications Include :-

- Water Vapourisation for fuel cell stack/gas humidification.
- Liquid precursor vapourisation for Chemical Vapour Deposition (CVD), Metal Oxide Chemical vapour deposition (MOCVD) and Atomic Layer Deposition (ALD).
- Thin film deposition for enhanced thermal, optical or hardness treatment such as diamond- like carbon coating and glass coating.
- Waterproofing of Acrylic Polymers.



What are some of the problems with conventional vapouriser systems ?

Brooks' DLI vapouriser technology overcomes many of the limitations of conventional vapourising techniques.

Home made bubblers or vapour draw systems are difficult to start and stop, require very close control of temperature and pressure and are inefficient at generating well controlled vapour mass.

Other types of flash vapourisers which apply heat to the liquid using a hot metal surface can cause problems with thermal decomposition of liquid precursors and can cause liquid carry-over onto the treatment surface causing incomplete or varying thickness of deposition.

How is the DLI different?

• A Brooks DLI system uses hot gas rather than a hot metal surface to vapourise the liquid. As liquid enters the hot gas chamber within the unit, it is atomised by a carrier gas stream.. Once the atomised liquid contacts the hot gas, it immediately changes to vapour resulting in chemically pure vapour, free of decomposition by-products or liquid carry over. By using an in built state of the art micro coriolis liquid flowmeter and digital thermal mass gas flow controller to accurately monitor and control the system the unit can be modified to accept multiple liquid inlets and will generate perfectly mixed vapours – talk to us about how we can offer different heat exchanger designs to accommodate a wide range of liquid properties :

- Extremely low vapour pressures (sub 1 torr)
- Very low flowrates (sub 5 grammes per hour)
- Very high flowrates (More than 15kg per hour)

Unlike bubblers or hotsurface “flash” vapourisers, the Brooks DLI system are super efficient at delivering smooth chemically pure vapour from liquids.

Vapour On – Demand

The DLI system is close to being a true “vapour on demand” system because increasing, decreasing or stopping the incompressible liquid flow quickly results in the desired change in vapour flow. With heater power from 100w up to 5 kw small or large volumes of liquid can be completely vapourised and controlled quickly and easily.

Call us now to find out how we can solve some of your challenging vapour production problems. Our experienced sales engineers are capable of guiding you step by step through the benefits of the Brooks DLI system. Either call us on 0161 406 2200 or email us at enquiries@flotech.co.uk
